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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BADR, HAMID R	

ART UNIT	PAPER NUMBER
1781	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,086	BURGERMEISTER ET AL.	
	Examiner	Art Unit	
	HAMID R. BADR	1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-18 and 20-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-18 and 20-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants' amendment filed 7/26/2010 is acknowledged.

1. Claims 13-18, and 20-29 are being considered on the merits.

2. Rejection of claim 14 under 35 U.S.C. 112 first paragraph (enablement) is withdrawn per Applicants' amendment.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 13-18 and 20-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 13 is indefinite for "thick liquid to solid paste". It is unclear what is meant by this phrase. It is unclear how a liquid can be thick or a paste can be solid.

4. Claim 13 is indefinite for "fermentation continues to a reduced extent". It is unclear whether the fermentation is continued at a reduced rate or the duration of fermentation is reduced to a finite period of time.

5. Claim 13 is indefinite for "main fermentation". Claim 13 requires cooling the dough simultaneously with the onset of fermentation, therefore, it is not clear which part of fermentation is 'main' which part is not.

6. Claim 18 is indefinite for "thick-liquid to solid paste". It is not clear how a liquid can be thick and how a paste can be solid.

7. Claim 18 is also indefinite for " the main fermentation is a solid state fermentation". The fermentation of a liquid (i.e. thick liquid) in a solid state fermentation is confusing and unclear.

8. Claim 21 is indefinite for "wheat flour is added to 1.5 to 5 wt. % of the pre dough concentrate produced according to claim 13 or 29". It is not clear what is meant by this phrase. It is unclear whether the final dough contains 1.5-5% of the pre-dough concentrate (e.g. 98.5% flour plus 1.5% pre-dough) or the pre-dough is mixed with flour so that e.g. 98.5 % pre-dough is mixed with 1.5% flour to make the final dough.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim13-18 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domingues et al. (WO 93/01724; hereinafter R1) in view of Schou et al. (EP 0 152 943; hereinafter R2)

11. R1 discloses a refrigerated yeast leavened dough composition and method of making the same.

12. R1 discloses that the ceased activity of the yeast at refrigeration temperatures will extend the storage of the dough at refrigeration temperatures as presently claimed.

13. R1 discloses that the yeast is rehydrated at a temperature of less than 10C and mixed with flour, water etc. The dough may be proofed at elevated temperatures. After it has been cooled, the dough may be stored at refrigeration temperature for 90 days or more without any substantial likelihood of rupturing a container due to an increase in carbon dioxide pressure. (page 3, summary of invention).

14. R1 discloses a yeast-containing dough composition which can be refrigerated for extended periods of time. Such a composition includes dried yeast, chilled water, and flour. (page 4, first paragraph).

15. R1 discloses that the water is preferably added 0C. The additional components of the dough can also be mixed with the yeast water slurry. Ingredients necessary to achieve a desired texture or taste in the final cooked dough product may be added at this stage. (page 7, paragraph 2)

16. R1 teaches of storing the dough immediately at refrigeration temperature at 4C to 7.2 C which holds the yeast in an inactive state. (page 7, last paragraph). Alternatively the dough composition may be held at an elevated temperature for a predetermined period of time to permit the yeast to leaven the dough shortly after the dough composition has been mixed. Once the dough has been leavened, it may then be stored at refrigeration temperatures to hold the yeast in its inactive state. (page 8, first paragraph).

17. Given that the dough ingredients are mixed; it is clear that the fermentation of the dough starts and the temperature of the dough starts to increase due to yeast activity and given that the dough is immediately stored at refrigeration temperature of 4C-7.2C

cooling of the dough starts immediately after the dough is placed at refrigeration temperature. It is also clear that depending on the volume of the dough, the cooling of the whole mass of the dough will take some time. The larger the volume of the dough, the longer the cooling time will be. However, as disclosed by R1, the mass of the dough should be cooled to 4C to 7.2C which overlaps with the 0-6C as presently claimed.

18. It is noted that claim 20, requires the production of a pre-dough concentrate (interpreted by the Examiner as a sponge dough) which is then mixed with flour and water to make a final dough for baking. Since the sponge method is known in the art, the dough composition as disclosed by R1 can be obviously made as a sponge dough (a pre-dough) and can be mixed with flour and water to make a final dough for baking later.

19. While R1 discloses that other ingredients can be mixed with the yeast flour mixture to affect the texture or flavor of the finished product, R1 is silent regarding the incorporation of a cooked flour product in the yeast-flour mixture.

20. R2 discloses a method of making bread where the cereal flour or mixture of flours is precooked by extrusion. The extrusion is carried out at temperature range of 150-180C. A composition is made from about 40% of rye meal and about 60% of wheat bran. (Abstract).

21. R2 teaches of a method in which a mixture of wheat flour (30%) and wheat bran (70%) is extruded at 150C. After the extrusion process, the mixture is pulverized in a mill. Rye meal is then mixed with more wheat flour, water, dough conditioner (acidifying agent), baker's yeast, and approximately 3% of the mixture and baked into a bread. The

mixture contains 10 parts by weight of the extruded, pulverized product. (Example 2, pages 5-6). Given that the process temperature is above the gelatinization temperature of starch, it is obvious that gluten in the thermally modified product will be denatured as presently claimed. It is also noted that the incorporation of the cooked flour product increases the water absorption rate of the flour into which the cooked product is incorporated. Therefore, depending on the desired level of water absorption, amount of the cooked pulverized product can be calculated and optimized as presently claimed. Increased water absorption will give a better yield of the baked product.

22. Sponge and direct dough methods as presently claimed are also known in the art. Levels of incorporation of sponge into the final dough are also known in the art.

23. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make a sponge dough (pre-dough) containing thermally processed cereal flour and refrigerate the sponge to lower the fermentation rate at low temperature of refrigeration as disclosed by R1. One would do so to be able to keep the sponge for a longer period of time having controlled the fermentation. Absent any evidence and based on the combined teachings of the cited references, there would be a reasonable expectation of success in making such a sponge.

Response to Arguments

Applicants arguments have been reviewed thoroughly. These arguments are not deemed persuasive for the following reasons.

1. Applicants argue that "thick liquid" and "solid paste" are definite.

a. The examiner does not agree with this argument. It is unclear how a liquid can be thick, or a paste can be solid.

2. Applicants argue that "fermentation continues to a reduced extent" is definite.

a. The examiner does not agree with this statement. The applicants have not determined a standard over which the reduced fermentation can be meaningful. Since the yeast and the natural flora of flour are usually mesophilic in nature, the fermentation rate is expected to be reduced at refrigerated storage. This fact is disclosed by R1.

3. Applicants argue that it should be understood that the heat generated in fermentation causes evaporation of water in the blend, rendering the blend relatively more solid as fermentation progresses. Thus the fermentation claimed is a solid state fermentation.

a. The examiner does not agree with Applicants' statement. The process as claimed does not appear to generate much heat to evaporate water. Even if there is some evaporation of water, the pre-dough still has a dough consistency. Applicants are claiming a "thick liquid" for the pre-dough, it is incomprehensive to say it is a solid state fermentation. Typical solid state fermentation is for instance growing mushrooms. The significance of claiming a solid state fermentation is not clear to the examiner either.

4. Applicants arguer that the formed blend undergoing main fermentation is immediately cooled in an environment having a temperature of 0 to 2C, and the pre-dough is then cooled in about 72 hours. Therefore, the fermentation that takes place in

forming the pre-dough concentrate is controlled from the time the fermentation commences.

a. Please take a closer look at R1. At page 7, R1 discloses that the liquid (water) used is a chilled liquid at 0 to 10C. Then the last paragraph at page 7; R1 discloses that the dough may be IMMEDIATELY stored at refrigeration temperature between 0 and 12C. The preferable range is 4-7.2 C. R1 then discloses that storing the dough in this manner holds the yeast in an inactive state wherein substantially ceases production of carbon dioxide. This is clearly the reduce fermentation rate that is being presently claimed.

5. Applicants argue that Domingues (R1) method is a common method of making ready to bake dough and only discloses the yeast re-hydration temperatures.

a. The rejection is an obviousness type of rejection. The presently claimed invention is obvious in light of the teachings of Domingues. It is true that dough disclosed by R1 is a ready to bake dough, however, since the sponge process (making a pre-dough and later mixing it with flour and other ingredients to make the final dough for baking) was known in the art, adoption of the teachings of Domingues to make a pre-dough is obvious; because the range of temperatures as disclosed by R1 and as presently claimed are overlapping. The concept of immediate refrigeration is disclosed by R1 and the reduced rate of fermentation and the storage temperatures are also disclosed by R1. The point is the obviousness of the present invention in light of the teachings of R1 and R2. The similarity of the disclosure by R1 and the presently claimed invention is

never the focus of this rejection. Once again, the presently claimed invention is obvious in light of the teachings of R1 and R2.

6. Applicants argue that there is no disclosure or suggestion that upon initiation of the main fermentation, the blend is subjected to cooling temperatures of 0 to 2C as set forth in the claimed subject matter.

a. Please see R1 at page 7. R1 mixes the ingredients (therefore the fermentation is initiated) and then dough is IMMEDIATELY stored at refrigeration between 0 and 12C. A preferred temperature range is 4-7.2 C. The claimed process is then obvious.

7. Applicants argue that Domingues does not suggest any urgency in commencing the cooling process and the temperature at which it is to take palce.

a. Please see R1 at page 7 specifically last paragraph.

8. Applicants argue that Domingues indicates that carbon dioxide production ceases at these temperatures which is in contrast to the claimed subject matter wherein the fermentation still takes place at a reduced rate.

a. Domingues does not say that the production of carbon dioxide ceased all together. Since the temperature of refrigeration as disclosed by R1 overlaps the refrigeration temperatures as presently claimed, the reduced rate of fermentation is intrinsic in the dough disclosed by R1.

9. Applicants arguer that Schou (R2) is completely at odds with the claimed subject matter.

a. Schou (R2) is cited as a teaching reference. R2 does not have to disclose what is disclosed by R1. R2 is cited to show that the inclusion of cooked flour, denatured gluten, in the final dough was known in the art at the time the invention was made.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R. Badr
Examiner
Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781